

**REMARKS**

Claims 1-21 are all the claims pending in the application.

Claims 1, 2, 5, 6, 9 and 21 are rejected under 35 U.S.C. § 102(b) as being anticipated by ITU G.983.1 [1998] (<http://crewman.uta.edu/-basu/5347spring2003/PON/pdf>).

Claims 3, 4, 7, 8, 10-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over ITU G.983.1 [1998] (<http://crewman.uta.edu/-basu/5347spring2003/PON/pdf>) in view of Kumozaki et al. (U.S. Patent No. 5,539,564).

The Applicants traverse the rejections and request reconsideration.

***Formal Matters***

Applicant thanks the Examiner for acknowledging the claim to foreign priority and for confirming that the certified copy of the priority document was received. Applicant thanks the Examiner for initialing the references filed with the Information Disclosure Statement filed on July 1, 2004. However the Examiner did not initial and return the PTO-1449 form filed with the Information Disclosure Statement on August 2, 2001. Applicant kindly request the Examiner to initial (if not already done) and return the PTO-1449 submitted with the Information Disclosure Statement filed on August 2, 2001.

***Drawings***

The Applicants attach replacement drawings for Fig. 1-3 that obviate the grounds for their objection. The Applicants respectfully request that these replacement drawings be entered.

***Claim Rejections under 35 U.S.C. § 102***

In rejecting claim 1, the Examiner incorrectly contends that ITU G.983.1 discloses the present invention. However, there exist significant differences between the present invention and ITU G.983.1.

The Applicants refer the Examiner to Appendix IV (pages 106-109) of the ITU-T G.983.1 document which shows a different architecture for an ATM-PON. Specifically, Fig. IV.2 (c) provides a structure for a full duplex ATM-PON system. In the full duplex system it is shown that both ONU #1 and ONU #2 include PON LT(1) as well as PON LT(0).

ITU-T G.983.1 discloses a block “VP/VC switch” in Fig. IV.1 and a block “ATM cross-connect function” at page 10. However, the ATM cross-connect function merely establishes a **static connection for VP/VC**. It should be noted that VP/VC switch is equivalent to the ATM cross-connect function. Significantly, **signals cannot be switched in such a configuration**. Therefore, such a configuration is completely different from and cannot function as in the present invention.

Claim 1 is not anticipated by the ITU-T G.983.1 document at least because it does not disclose or suggest a switch controlling means which switches to each of a VP or a VC on the basis of a switch controlling function.

Claim 2 is dependant on claim 1 and should be allowed for at least the same reasons.

Claim 5 requires a selector that selects between signals in two termination lines. However, in the architecture disclosed in the ITU-T G.983.1 document, signals cannot be switched. Therefore, it does not disclose a selector that selects between two termination lines.

Claim 6 is dependant on claim 5 and should be allowed for at least the same reasons.

Claim 9 includes limitations analogous to the ones described above in relation to claim 1. Therefore, it should be allowable at least for reasons analogous to the ones discussed above in relation to claim 1.

Claim 21 requires switching output lines by an optical switch. As noted above, in the architecture disclosed in the ITU-T G.983.1 document, signals cannot be switched. Therefore, it does not disclose switching output lines, as required by claim 21.

***Claim Rejections under 35 U.S.C. § 103***

Claim 3 requires **line switch** of ONUs by using K1/K2 bytes. As noted above in relation to claim 1, signals cannot be switched in the architecture disclosed in the ITU-T G.983.1 document. Further, Kumozaki, does not overcome the deficiency noted in the teachings of the ITU-T G.983.1 document. Claim 3 is not suggested by the combined teachings of the ITU-T G.983.1 document and Kumozaki, at least because the combined teachings do not suggest line switch of ONUs.

Claim 4 is dependant on claim 3 and should be allowed for at least the same reasons.

Claim 7 is dependant on claim 6 and should be allowed at least for the same reasons for which claim 6 is allowable. Further, Kumozaki, does not overcome the deficiency noted in the teachings of the ITU-T G.983.1 document.

Claim 8 includes limitations analogous to the ones described above in relation to claim 1. Therefore, it should be allowable at least for reasons analogous to the ones discussed above in relation to claim 1. Further, Kumozaki, does not overcome the deficiency noted in the teachings of the ITU-T G.983.1 document.

Claims 10-16 are dependant on claim 9 and should be allowed at least for the same reasons for which claim 9 is allowable. Further, Kumozaki, does not overcome the deficiency noted in the teachings of the ITU-T G.983.1 document.

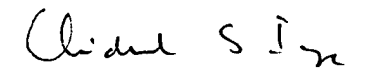
Claims 17-20 include limitations analogous to the ones described above in relation to claim 1. Therefore, they should be allowable at least for reasons analogous to the ones discussed above in relation to claim 1. Further, Kumozaki, does not overcome the deficiency noted in the teachings of the ITU-T G.983.1 document.

***Conclusion***

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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